

Date: Tuesday, 10/30/2007 2:48:26 PM  
 User: Kim Johnston

## Process Sheet

48

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : AFT X-TUBE EXT HEIGHT GEAR  
 Job Number : 35429  
 Estimate Number : 10421  
 P.O. Number : *N/A* Part Number : D205596103  
 This Issue : 10/30/2007 S.O. No. : *N/A* Drawing Number : D205-596-103 REV A  
 Prsht Rev. : NC Project Number : N/A  
 First Issue : *N/A* Type : LANDING GEAR Drawing Revision : A  
 Previous Run : 35428 Material : *N/A*  
 Due Date : 11/30/2007 Qty: 1 Um: Each  
 Written By :  
 Checked & Approved By : *10/07.10.30*  
 Comment : Est Rev: 05.06.10 Acid etch moved to Step 11 KJ/JLM

## Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



Comment: DOCUMENT CONTROL

Photocopy D205-594 bluefile &amp; type labels per PPP D205-596-103CHG001

DS1 9376

07/11/27 KS.

2.0 D2890 Aft Crosstube



Comment: Qty.: 1.0000 Each(s)/Unit Total: 1.0000 Each(s)

Pick:

Qty Part number Description Batch

1 D2890 Aft Crosstube ~~B35423~~ B35423

EL 7-10-31

3.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Mark 37.30" for cutting from tangential line in the straight section from D2890 as per Dwg wall template.

EL 7-10-31

4.0 QC15 DIMENSIONAL CHECK OF X-TUBES



Comment: DIMENSIONAL CHECK OF X-TUBES

7-10-31 (1)

5.0 LANDING GEAR 1 LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

1-Cut as per Dwg D205-596-103

SR

7-11-8

AWM - 07-11-20

JD

2-Deburr &amp; Inspect for surface damage. Polish cut surface. Scribe part # and batch # on one end of tube.

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries

Date: Tuesday, 10/30/2007 2:48:26 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT X-TUBE EXT HEIGHT GEAR

Job Number: 35429

Part Number: D205596103

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC15

DIMENSIONAL CHECK OF X-TUBES



Pre-checked dims 07-11-21 → scribbling  
inspect finish



Comment: DIMENSIONAL CHECK OF X-TUBES

07/12/07 07/12/07

7.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



07-11-28  
AUM



Comment: HAND FINISHING RESOURCE #1

TOUCH UP Chemical Conversion Coat as per QSI 005 4.1



8.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07/12/10 07/12/10

9.0

SPRAY PAINTING

SPRAY PAINTING



Comment: SPRAY PAINTING

1-Prime inside and outside with Immron per QSI 005 4.2

ml 07 12 13 ①

10.0

QC14

INSPECT SPRAY PAINT



Comment: Inspect Spray Paint

07/12/13 07/12/13

11.0

D2856600

Abrasion Strip



Comment: Qty: 1.7640 f(s)/Unit Total: 1.7640 f(s) Exp: 05/2008 Time: 200pm

Pick:

Qty Part number

Description

Batch

2 D2856-600(10.090")

Abrasion Strip

B105379

Magnabond

ml 07 12 14

12.0

D29401

Support



Comment: Qty.: 2.0000 Each(s)/Unit Total: 2.0000 Each(s)

Pick:

Qty Part number

Description

Batch

2 D2940-1

Support

32780

ml 07 12 14

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes ☐ No ☒ DQA: LD Date: 08/01/03  
 QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries

Date: Tuesday, 10/30/2007 2:48:26 PM  
User: Kim Johnston

## Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: AFT X-TUBE EXT HEIGHT GEAR

Job Number: 35429

Part Number: D205596103

Job Number:



Seq. #:

Machine Or Operation:

Description:

13.0

MS2192028

Clamp(per MIL-DTL-8783C)



Comment: Qty.: 4.0000 Each(s)/Unit Total: 4.0000 Each(s)

Pick:

Qty Part number

Description

Batch

4 MS21920-28

Clamp

104423 ml 07 12 14

14.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

Install abrasion strips per QSI 035 position using DT8582. Install supports and clamps per Dwg

D205-596-103. Torque clamps to 80-100 in lb.

ml 07 12 14 ①  
10/22/07 per DSI 9396 se attached per  
EEN 1075

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

5/2/20 FL

16.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D205-596-103

Location: G

1/12/27 50

17.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

2008/01/03

Job Completion



ml 2008/1/2

W

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

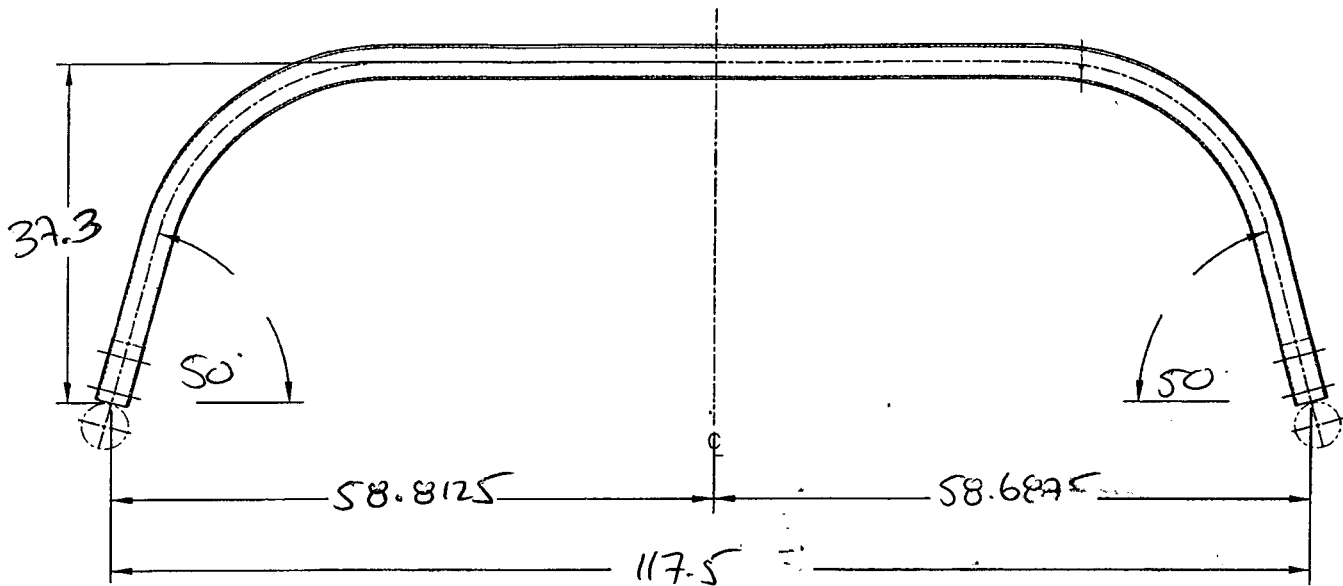
QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

NOTE: Date & initial all entries

|                                      |  |              |              |
|--------------------------------------|--|--------------|--------------|
| DART AEROSPACE LTD                   |  | Work Order:  | 35429        |
| Description: Crosstube High-High Aft |  | Part Number: | D205-596-103 |
| Inspection Dwg: D205-596-103 Rev: A  |  | Page 1 of 1  |              |

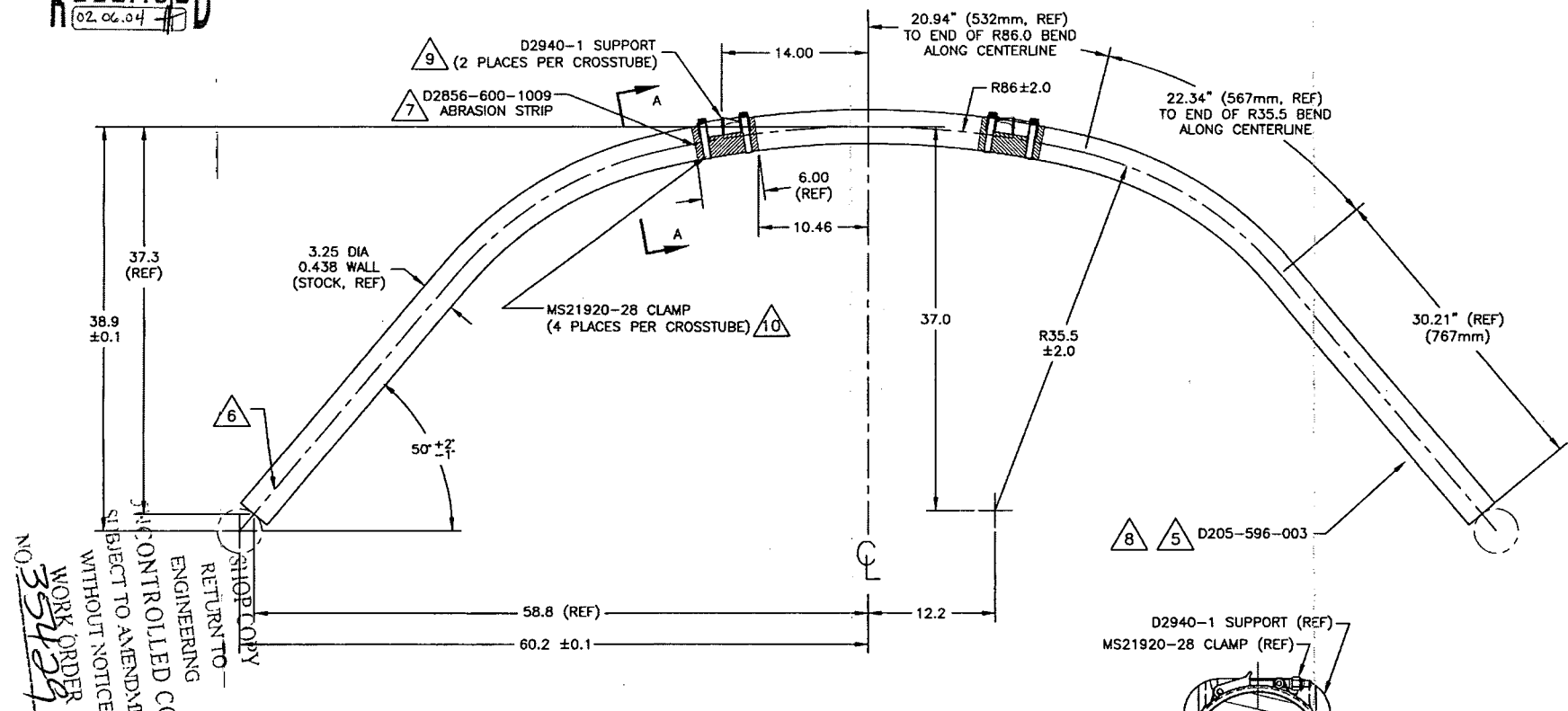
| Required Dimension | Min   | Max   |
|--------------------|-------|-------|
| Height             | 37.2  | 37.4  |
| 1/2 Span           | 58.7  | 58.9  |
| Angle              | 49    | 52    |
| Total Span         | 117.4 | 117.8 |



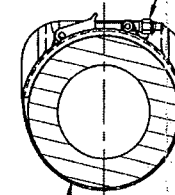
| Comments |
|----------|
|          |
|          |
|          |
|          |

|                 |                    |
|-----------------|--------------------|
| QC15 Inspection | <i>[Signature]</i> |
| Date            |                    |

| Rev | Date     | Change    | Revised by               | Approved           |
|-----|----------|-----------|--------------------------|--------------------|
| A   | 07.02.06 | New Issue | KJ/JM <i>[Signature]</i> | <i>[Signature]</i> |




SECTION A-A  
SCALE 2:5



D2856-600-1009 ABRASION STRIP (REF)

- GENERAL NOTES:
- 1) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
  - 2) MATERIAL: MANUFACTURE FROM D6008-180  
FINISHED LENGTH = 146.98
  - 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
  - 4) PART IS SYMMETRIC ABOUT CENTERLINE
  - 5) BEND PROGRESSIVELY WITH A MINIMUM OF 3 PASSES. MAXIMUM TUBE FLATTENING DUE TO BENDING IS 6% BASED ON O.D.
  - 6) SCRIBE DART PART NUMBER AND BATCH NUMBER IN THIS AREA WITH VIBRATING STYLUS
  - 7) INSTALL D2856-600-1009 ABRASION STRIP WITH A 0.13 (REF) GAP ON BOTTOM SIDE OF CROSSTUBE, CENTERED OPPOSITE D2940-1 SUPPORT, PER QSI 035
  - 8) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
  - 9) SEAL EDGES OF SUPPORTS USING SIKAFLEX-241/-291 SEALANT (OPTIONAL)
  - 10) TORQUE CLAMPS 80 TO 100 IN-LB

|  |  |         |          |          |                                  |  |                             |
|--|--|---------|----------|----------|----------------------------------|--|-----------------------------|
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|  |  | CHECKED | A        | APPROVED | A                                |  | DRAWING NO.<br>D205-596-103 |
|  |  | DATE    | 02.05.27 |          | TITLE<br>XTUBE ASS'Y (HI-HI AFT) |  | REV. A<br>SHEET 1 OF 1      |



# DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D205-594 Rev. C (AND EARLIER) AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D205-594 Rev. 2 (AND EARLIER)

REF. CANADIAN STC: SH03-6

REF. FAA STC: SR01742NY

For D205-596-101/-103 Crosstubes (ref. 39" Landing Gear) or D205-596-105/-107 Crosstubes (ref. 31" Landing Gear) at CHG 002 or later, the D2856-600-851/-1009 Abrasion Strips have been removed, the D2893-1 and D2940-1 Supports have been bonded onto the crosstubes using Magnobond 6398 and D3595-063-450/-530 Rubber Cushions have been installed underneath the MS21920-26/-30 Clamps. Amend Parts List of IIN-D205-594 Section 5 and ICA-D205-594 Section 32.8 as follows:

## Remove:

| QTY<br>-101 | QTY<br>-103 | QTY<br>-105 | QTY<br>-107 | Part Number    | Description    |
|-------------|-------------|-------------|-------------|----------------|----------------|
| 2           |             | 2           |             | D2856-600-851  | ABRASION STRIP |
| 4           |             | 4           |             | MS21920-24     | CLAMP          |
|             | 2           |             | 2           | D2856-600-1009 | ABRASION STRIP |
|             | 4           |             | 4           | MS21920-28     | CLAMP          |

## Add:

| QTY<br>-101 | QTY<br>-103 | QTY<br>-105 | QTY<br>-107 | Part Number   | Description    |
|-------------|-------------|-------------|-------------|---------------|----------------|
| 4           |             | 4           |             | D3595-063-450 | RUBBER CUSHION |
| 4           |             | 4           |             | MS21920-26    | CLAMP          |
|             | 4           |             | 4           | D3595-063-530 | RUBBER CUSHION |
|             | 4           |             | 4           | MS21920-30    | CLAMP          |

To prevent the supports from shifting on D205-596-101/-103/-105/-107 Crosstubes at CHG 001, the D2893-1 or D2940-1 Supports should be removed and re-installed as follows:

- 1) Follow section 32.1 of ICA-D205-594 for the removal of the crosstubes from the helicopter.
- 2) Remove the MS21920-24/-28 Clamps that fasten the D2893-1 and D2940-1 Supports from the crosstubes per Section 32.3 of ICA-D205-594.
- 3) Remove the D2856-600-851/-1009 Abrasion Strips from the crosstube per section 32.5 of ICA-D205-594.
- 4) Inspect the crosstube surface underneath the supports for corrosion and mechanical damage per items 5.3.1 and 5.3.2 of the 300 hour inspection. Repair damage within acceptable limits and touch up finish per item 5.3.3 of the 300 hour inspection.
- 5) Inspect the supports for corrosion and mechanical damage per items 5.3.4 of the 300 hour inspection. Repair damage within acceptable limits and touch up finish per item 5.3.4 of the 300 hour inspection.
- 6) Abrade area to which support will be applied with 400 grit sandpaper. Saturate a clean cloth with MEK or 4105S Wash'n'Wipe Degreaser or equivalent and wipe area until there is no residue.
- 7) Apply a 0.03" to 0.06" thick layer of Magnobond 6398 underneath D2893-1 or D2940-1 Supports and re-install the Supports on the crosstube as shown in Figure 1. Install a D3595-063-450/-530 Rubber Cushion on each MS21920-26/-30 Clamp. Position and secure the D2893-1 or D2940-1 Supports on the crosstube using MS21920-26/-30 Clamps. Torque clamps to 80-100 in-lb. Let the D205-596-101/-103/-105/-107 Crosstube Assembly cure before re-installing the crosstube on the aircraft.
- 8) Re-install the D205-596-101/-103/-105/-107 crosstube per section 32.2 of ICA-D205-594.

CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01.

APPROVED

BY:

D. SHEPHERD (DE # 02)

DATE: 07.11.16

CERT. NO.: SH03-6

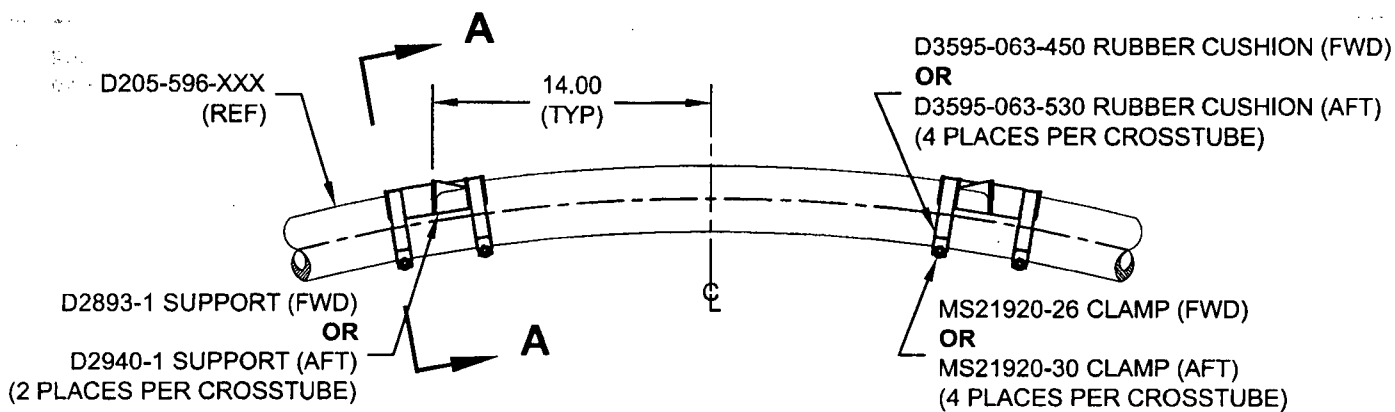
ISSUE NO.: 3

|            |             |  |              |
|------------|-------------|--|--------------|
| A          | NEW ISSUE   | MB   | 07.11.16     |
| REV.       | DESCRIPTION | BY   | DATE         |
| DESIGN     |             | <b>DART AEROSPACE LTD</b>  |              |
| DRAWN      |             | HAWKESBURY, ONTARIO, CANADA  |              |
| CHECKED    |             | DRAWING NO.  | REV. A       |
| MFG. APPR. |             | DSI 9396   | SHEET 1 OF 2 |
| APPROVED   |             | TITLE  | SCALE        |
| DE APPR.   |             | CROSSTUBE SUPPORT CHANGE   | NTS          |
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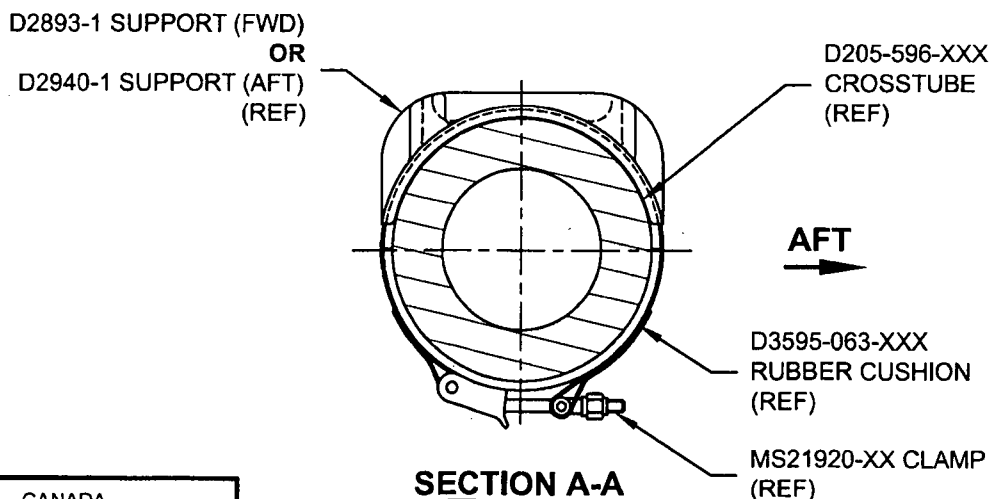
For customers who would like to upgrade their D205-596-101/-103/-105/-107 Crosstubes from CHG 001 to CHG 002, the following kits can be obtained from Dart: \_\_\_\_\_

### DSI 9396-XXX PARTS LIST

| QTY<br>-011 | QTY<br>-013 | Part Number   | Description   |
|-------------|-------------|---------------|---|
| X           |             | DSI 9396-011  | FWD CROSSTUBE SUPPORT CHANGE<br>(D205-596-101/-105 FWD CROSSTUBE) |
|             | X           | DSI 9396-013  | AFT CROSSTUBE SUPPORT CHANGE<br>(D205-596-103/-107 AFT CROSSTUBE) |
| 4           |             | D3595-063-450 | RUBBER CUSHION  |
| 4           |             | MS21920-26    | CLAMP   |
|             | 4           | D3595-063-530 | RUBBER CUSHION  |
|             | 4           | MS21920-30    | CLAMP   |



**FIGURE 1: INSTALLATION OF SUPPORT ON CROSSTUBE**



CANADA  
DEPARTMENT OF TRANSPORT  
AIRCRAFT CERTIFICATION  
BRANCH  
DAO # 01-O-01

APPROVED  
BY: *[Signature]*  
D. SHEPHERD (DE # 02)

DATE: 07.11.16  
CERT. NO.: SH03-6  
ISSUE NO.: 3

|            |                    |  |
|------------|--------------------|--|
| DESIGN     |                    | <b>DART AEROSPACE LTD</b><br>HAWKESBURY, ONTARIO, CANADA   |
| DRAWN      |                    |  |
| CHECKED    | <i>[Signature]</i> | DRAWING NO. REV. A   |
| MFG. APPR. | <i>[Signature]</i> | DSI 9396 SHEET 2 OF 2  |
| APPROVED   | <i>[Signature]</i> | TITLE SCALE  |
| DE APPR.   | <i>[Signature]</i> | CROSSTUBE SUPPORT CHANGE NTS   |
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Customer : CC-DAR01 Dart Aerospace Ltd.  
Job Number : 36810  
Estimate Number : 10804  
P.O. Number :  
This Issue : 17/01/2008 S.O. No. :  
Prsht Rev. : NC  
First Issue : / / Type : LANDING GEAR  
Previous Run : 00015

Drawing Name : D205-596

Part Number : Z\_CUSTOM  
Drawing Number : ECN 1108  
Project Number :  
Drawing Revision :  
Material :  
Due Date : 24/01/2008

Qty: 1 Um: Each

Written By :  
Checked & Approved By :  
Comment :

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 PACKAGING 1 PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

REMOVE FROM STOCK

D205-596-101

32941-34946-34947

D205-596-103

35427-35429-36067-36068

D205-596-105

D205-596-107

35224-

ADD NEW PAPERWORK TO KITS  
DSI 9396 REV.B, PER ECN 1108

RETURN TO STK

8/1/15 SP (8x)

2.0 QC21 FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

15080121

Job Completion



2008/1/21

U